SONY

CARD CAMERA

CCB-ME37
CCB-ME37CE

SERVICE MANUAL

1. BLOCK DIAGRAM
2. ELECTRICAL ADJUSTMENT
3. ELECTRICAL PARTS LIST
4. SCHEMATIC DIAGRAMS

CCB-ME37
CCB-ME37CE
9-977-330-01

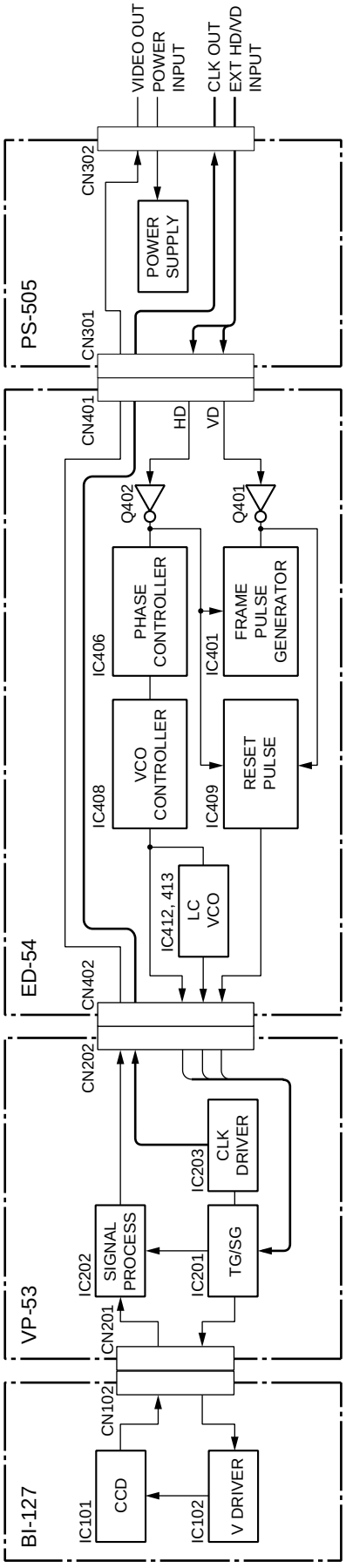
Sony Corporation
Image & Sound Communication Company

Printed in Japan
1997. 12 08

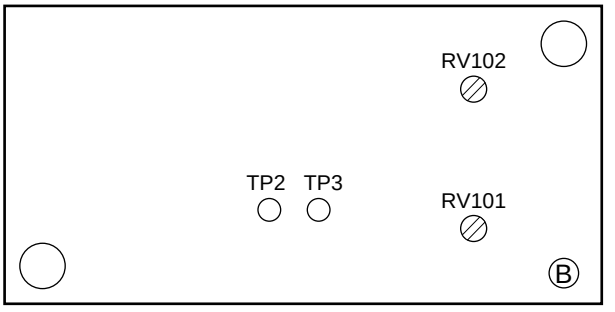
©1997

Published by
Engineering Services Dept.

SECTION 1
BLOCK DIAGRAM



SECTION 2
ELECTRICAL ADJUSTMENT



– BI-127 board –

V_{SUB} Adjustment

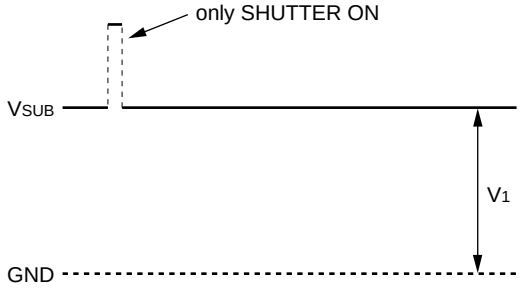
Equipment: Oscilloscope
Measurement point: TP3/BI-127 board
Adjustment point: RV101/BI-127 board

Procedure:

1. Take note of the alphanumeric characters visible in the square hole at back of the BI board.
2. Adjust RV101 so that the value of V1 conforms to the corresponding value shown in the following voltage table.

Example: 3K

V_{SUB} code	E	f	G	h	J	K	L	m	N	P
Specified value (V)	9.0	9.5	10.0	10.5	11.0	11.5	12.0	12.5	13.0	13.5
VSUB code	Q	R	S	T	U	V	W	X	Y	Z
Specified value (V)	14.0	14.5	15.0	15.5	16.0	16.5	17.0	17.5	18.0	18.5



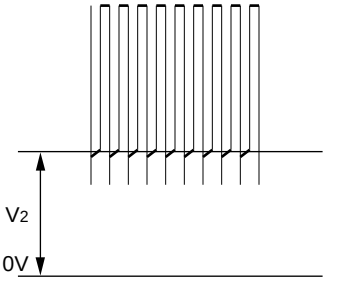
PGLL Adjustment

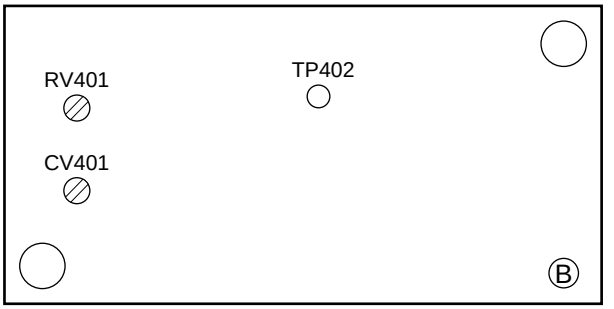
Equipment: Oscilloscope
Measurement point: TP2/BI-127 board
Adjustment point: RV102/BI-127 board

Procedure:
Adjust RV102 so that the value of V2 conforms to the corresponding value shown in the following voltage table.

Example: 3K

PGLL code	0	1	2	3	4	5	6	7
Specified value (V)	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0





– ED-54 board –

HD Frequency Adjustment

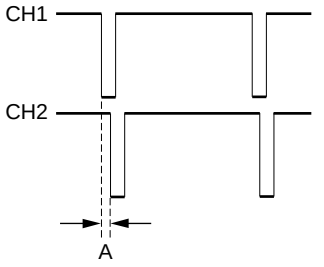
Equipment:	Oscilloscope
Measurement point:	TP402/ED-54 board
Adjustment point:	CV401
Specification:	DC 2.5 ±0.1 V

Procedure:
Input the external SYNC signal to CN302-18pin/PS-505 board (HD IN).

HD Phase Adjustment

Equipment:	Oscilloscope
Measurement point:	CH1: CN302-18pin/PS-505 board (HD IN) CH2: CN302-16pin/PS-505 board (HD OUT)
Adjustment point:	RV401/ED-54 board
Specification:	A = 0 ± 200 µs

Procedure:
Input the external SYNC signal to CN302-18pin/PS-505 board (HD IN).



http://getMANUAL.com

SECTION 3
ELECTRICAL PARTS LIST

BI-127 BOARD(CCB-ME37/ME37CE)

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8317-259-A	o	MOUNTED CIRCUIT BOARD, BI-127 (for CCB-ME37)
1pc	A-8317-264-A	o	MOUNTED CIRCUIT BOARD, BI-127CE (for CCB-ME37CE)
C101	1-135-193-11	s	TANTAL 0.1uF 20% 35V
C102	1-104-630-11	s	TANTAL 33uF 20% 6.3
C103	1-135-193-11	s	TANTAL 0.1uF 20% 35V
C104	1-107-862-11	s	TANTAL 1uF 20% 16V
C105	1-104-813-11	s	TANTAL 10uF 20% 16V
C106	1-135-263-21	s	TANTAL 10uF 20% 10V
C107	1-135-195-21	s	TANTAL 0.47uF 10% 25V
C108	1-135-193-11	s	TANTAL 0.1uF 20% 35V
C109	1-135-324-11	s	TANTALUM 1uF 20% 20V
C110	1-164-943-11	s	CERAMIC 0.01uF 10% 16V
C111	1-135-225-11	s	TANTAL 33uF 10% 16V
C112	1-164-943-11	s	CERAMIC 0.01uF 10% 16V
C113	1-135-229-11	s	TANTALUM 6.8uF 20% 6.3
C114	1-107-812-11	s	TANTAL 4.7uF 20% 6.3
C115	1-164-943-11	s	CERAMIC 0.01uF 10% 16V
CN102	1-691-524-11	s	CONNECTOR, BOARD TO BOARD 20P
D101	8-719-059-51	s	DIODE MA3J142E0LSO
D102	8-719-059-50	s	DIODE MA3J142D0LSO
D103	8-719-059-50	s	DIODE MA3J142D0LSO
D104	8-719-404-49	s	DIODE MA111
IC101	8-752-610-83	s	IC ICX059AL-A(for CCB-ME37CE)
IC102	8-752-372-14	s	IC CXD1267AN-T4
L101	1-412-030-11	s	INDUCTOR CHIP 22uH
L102	1-412-030-11	s	INDUCTOR CHIP 22uH
L103	1-412-030-11	s	INDUCTOR CHIP 22uH
Q101	8-729-012-35	s	TRANSISTOR 2SK711-BL/V-TE85L
Q102	8-729-230-60	s	TRANSISTOR 2SA1586YG
Q103	8-729-905-34	s	TRANSISTOR 2SC4081T106Q
Q104	8-729-230-60	s	TRANSISTOR 2SA1586YG
R101	1-218-960-11	s	METAL 3.9K 5% 1/16W
R102	1-218-941-11	s	METAL 100 5% 1/16W
R103	1-218-967-11	s	METAL 15K 5% 1/16W
R104	1-218-954-11	s	METAL 1.2K 5% 1/16W
R105	1-218-972-11	s	METAL 39K 5% 1/16W
R106	1-218-977-11	s	METAL 100K 5% 1/16W
R107	1-218-961-11	s	METAL 4.7K 5% 1/16W
R108	1-218-945-11	s	METAL 220 5% 1/16W
R109	1-218-989-11	s	METAL 1M 5% 1/16W
R110	1-218-977-11	s	METAL 100K 5% 1/16W
R111	1-218-973-11	s	METAL 47K 5% 1/16W
R112	1-218-977-11	s	METAL 100K 5% 1/16W
RV101	1-238-092-11	s	RES, ADJ METAL 47K
RV102	1-238-092-11	s	RES, ADJ METAL 47K

ED-54 BOARD(CCB-ME37/ME37CE)

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8317-257-A	o	MOUNTED CIRCUIT BOARD, ED-54
C401	1-104-929-11	s	TANTAL 22uF 20% 6.3
C402	1-164-943-11	s	CERAMIC 0.01uF 10% 16V
C403	1-104-629-11	s	TANTAL, CHIP 15uF 20% 6.3V
C404	1-104-629-11	s	TANTAL, CHIP 15uF 20% 6.3V
C405	1-164-874-11	s	CERAMIC 100PF 5% 16V
C406	1-164-874-11	s	CERAMIC 100PF 5% 16V
C407	1-164-940-11	s	CERAMIC, HIPT 0.0033uF 10% 16V
C408	1-164-878-11	s	CERAMIC, CHIP 150pF 5% 16V
C409	1-164-941-11	s	CERAMIC 0.0047uF 10% 16V
C410	1-164-874-11	s	CERAMIC 100PF 5% 16V
C411	1-164-930-11	s	CERAMIC, CHIP 330pF 5% 16V
C413	1-164-874-11	s	CERAMIC 100PF 5% 16V
C415	1-164-930-11	s	CERAMIC, CHIP 330pF 5% 16V
C416	1-107-819-11	s	CERAMIC 0.022uF 10% 16V
C418	1-135-229-11	s	TANTALUM 6.8uF 20% 6.3
C419	1-135-193-11	s	TANTAL 0.1uF 20% 35V
C420	1-164-874-11	s	CERAMIC 100PF 5% 16V
C421	1-164-850-11	s	CERAMIC 10PF 0.5PF 16V
C423	1-164-850-11	s	CERAMIC 10PF 0.5PF 16V
C424	1-107-820-11	s	CERAMIC, CHIP 0.1uF 16V
C425	1-164-854-11	s	CERAMIC, CHIP 15pF 5% 16V
CN401	1-691-476-21	s	CONNECTOR, BOARD TO BOARD 20P
CN402	1-691-524-11	s	CONNECTOR, BOARD TO BOARD 20P
CV401	1-141-311-11	s	VAR, TRIMMER 20PF
D401	8-719-974-98	s	DIODE HVM17-01
IC401	8-759-180-08	s	IC TC74HC4538AFS
IC402	8-759-271-88	s	IC TC7SHU04FU-TE85R
IC403	8-759-180-08	s	IC TC74HC4538AFS
IC404	8-759-196-93	s	IC TC7SH00FU-TE85R
IC406	8-759-180-08	s	IC TC74HC4538AFS
IC408	8-759-009-02	s	IC MC14046BF
IC409	8-759-475-65	s	IC TC74HC107AF(EL)
IC412	8-759-271-88	s	IC TC7SHU04FU-TE85R
IC413	8-759-271-88	s	IC TC7SHU04FU-TE85R
L401	1-410-387-11	s	INDUCTOR CHIP 33uH
L402	1-412-781-61	s	INDUCTOR 2.7uH
Q401	8-729-230-60	s	TRANSISTOR 2SA1586YG
Q402	8-729-230-60	s	TRANSISTOR 2SA1586YG
R401	1-216-182-00	s	RES, CHIP 220 5% 1/8W
R402	1-216-182-00	s	RES, CHIP 220 5% 1/8W
R403	1-216-182-00	s	RES, CHIP 220 5% 1/8W
R404	1-216-182-00	s	RES, CHIP 220 5% 1/8W
R405	1-216-182-00	s	RES, CHIP 220 5% 1/8W
R406	1-216-182-00	s	RES, CHIP 220 5% 1/8W
R407	1-218-961-11	s	METAL 4.7K 5% 1/16W
R408	1-218-961-11	s	METAL 4.7K 5% 1/16W
R409	1-218-973-11	s	METAL 47K 5% 1/16W
R410	1-218-973-11	s	METAL 47K 5% 1/16W
R411	1-218-961-11	s	METAL 4.7K 5% 1/16W
R412	1-218-961-11	s	METAL 4.7K 5% 1/16W
R413	1-218-990-11	s	METAL GLAZE 0 5% 1/16W
R415	1-218-963-11	s	RES, CHIP 6.8K 5% 1/16W
R416	1-218-965-11	s	METAL 10K 5% 1/16W

(ED-54 BOARD(CCB-ME37/ME37CE))

Ref. No. or Q'ty	Part No.	SP	Description
R417	1-218-963-11	s	RES, CHIP 6.8K 5% 1/16W
R418	1-218-965-11	s	METAL 10K 5% 1/16W
R419	1-218-953-11	s	METAL 1K 5% 1/16W
R420	1-218-964-11	s	METAL 8.2K 5% 1/16W
R421	1-208-677-11	s	METAL, CHIP 560 0.5% 1/16W
R423	1-218-964-11	s	METAL 8.2K 5% 1/16W
R424	1-218-953-11	s	METAL 1K 5% 1/16W
R425	1-218-953-11	s	METAL 1K 5% 1/16W
R426	1-218-965-11	s	METAL 10K 5% 1/16W
R427	1-218-965-11	s	METAL 10K 5% 1/16W
R428	1-218-965-11	s	METAL 10K 5% 1/16W
R429	1-218-953-11	s	METAL 1K 5% 1/16W
R430	1-218-957-11	s	METAL 2.2K 5% 1/16W
R432	1-218-977-11	s	METAL 100K 5% 1/16W
R434	1-218-989-11	s	METAL 1M 5% 1/16W
R437	1-218-948-11	s	RES, CHIP 390 5% 1/16W
R438	1-218-933-11	s	METAL 22 5% 1/16W
RV401	1-238-092-11	s	RES, ADJ METAL 47K

PS-505 BOARD(CCB-ME37/ME37CE)

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8317-258-A	o	MOUNTED CIRCUIT BOARD, PS-505
C301	1-164-882-11	s	CERAMIC 220PF 5% 16V
C302	1-104-929-11	s	TANTAL 22uF 20% 6.3
C303	1-109-888-11	s	TANTAL 3.3uF 20% 6.3
C304	1-164-941-11	s	CERAMIC 0.0047uF 10% 16V
C305	1-107-862-11	s	TANTAL 1uF 20% 16V
C306	1-164-943-11	s	CERAMIC 0.01uF 10% 16V
C307	1-107-812-11	s	TANTAL 4.7uF 20% 6.3
C308	1-107-819-11	s	CERAMIC 0.022uF 10% 16V
C309	1-104-813-11	s	TANTAL 10uF 20% 16V
C310	1-135-328-11	s	TANTAL 4.7uF 20% 16V
C311	1-135-263-21	s	TANTAL 10uF 20% 10V
C312	1-135-328-11	s	TANTAL 4.7uF 20% 16V
C313	1-107-862-11	s	TANTAL 1uF 20% 16V
C314	1-107-496-11	s	TANTAL 47uF 20% 16V
C315	1-115-200-11	s	TANTAL, CHIP 33uF 20% 20V
C316	1-107-496-11	s	TANTAL 47uF 20% 16V
C317	1-107-496-11	s	TANTAL 47uF 20% 16V
C318	1-107-496-11	s	TANTAL 47uF 20% 16V
C319	1-107-496-11	s	TANTAL 47uF 20% 16V
C320	1-107-496-11	s	TANTAL 47uF 20% 16V
CN301	1-691-524-11	s	CONNECTOR, BOARD TO BOARD 20P
CN302	1-750-343-11	o	CONNECTOR, FFC/EPC (ZIF) 22P
D301	8-719-027-77	s	DIODE MA796-TX
IC301	8-759-261-48	s	IC TL1451ACPW-E20
IC302	8-759-339-39	s	IC RN5RG50AA-TL
L301	1-402-831-21	s	COIL, CHOKE 68uH
L302	1-402-831-21	s	COIL, CHOKE 68uH
L303	1-414-275-11	s	INDUCTOR 220uH
L304	1-414-275-11	s	INDUCTOR 220uH
L305	1-412-030-11	s	INDUCTOR CHIP 22uH
L306	1-412-030-11	s	INDUCTOR CHIP 22uH
L307	1-409-667-21	s	COIL, CHOKE 220uH
Q301	8-729-804-41	s	TRANSISTOR 2SB1122-S-TD
Q302	8-729-823-82	s	TRANSISTOR FP101-TL
Q303	8-729-112-26	s	TRANSISTOR 2SB804-T2AU
R301	1-218-971-11	s	METAL 33K 5% 1/16W
R302	1-218-961-11	s	METAL 4.7K 5% 1/16W
R303	1-208-718-11	s	METAL 30K 0.50% 1/16W
R304	1-218-965-11	s	METAL 10K 5% 1/16W
R305	1-218-961-11	s	METAL 4.7K 5% 1/16W
R306	1-218-961-11	s	METAL 4.7K 5% 1/16W
R307	1-218-961-11	s	METAL 4.7K 5% 1/16W
R308	1-218-977-11	s	METAL 100K 5% 1/16W
R309	1-218-945-11	s	METAL 220 5% 1/16W
R310	1-218-977-11	s	METAL 100K 5% 1/16W
R311	1-218-961-11	s	METAL 4.7K 5% 1/16W
R312	1-218-961-11	s	METAL 4.7K 5% 1/16W
R313	1-218-969-11	s	METAL 22K 5% 1/16W
R314	1-218-969-11	s	METAL 22K 5% 1/16W
R315	1-218-972-11	s	METAL 39K 5% 1/16W
R316	1-218-961-11	s	METAL 4.7K 5% 1/16W
R317	1-208-690-11	s	METAL, CHIP 2K 0.5% 1/16W
R318	1-218-953-11	s	METAL 1K 5% 1/16W
R319	1-218-949-11	s	METAL 470 5% 1/16W
R320	1-218-949-11	s	METAL 470 5% 1/16W

(PS-505 BOARD(CCB-ME37/ME37CE))

Ref. No. or Q'ty	Part No.	SP	Description
R321	1-218-953-11	s	METAL 1K 5% 1/16W
R322	1-218-933-11	s	METAL 22 5% 1/16W
R323	1-218-951-11	s	METAL 680 5% 1/16W
R324	1-218-965-11	s	METAL 10K 5% 1/16W
T301	1-450-976-11	s	TRANSFORMER, CONVERTER

VP-53 BOARD(CCB-ME37/ME37CE)

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8317-260-A	o	MOUNTED CIRCUIT BOARD, VP-53 (for CCB-ME37)
1pc	A-8317-265-A	o	MOUNTED CIRCUIT BOARD, VP-53CE (for CCB-ME37CE)
C202	1-164-937-11	s	CERAMIC 0.001uF 10% 16V
C203	1-164-850-11	s	CERAMIC 10PF 0.5PF 16V
C205	1-107-813-11	s	TANTAL 10uF 20% 6.3
C206	1-164-937-11	s	CERAMIC 0.001uF 10% 16V
C207	1-107-813-11	s	TANTAL 10uF 20% 6.3
C208	1-164-943-11	s	CERAMIC 0.01uF 10% 16V
C209	1-107-813-11	s	TANTAL 10uF 20% 6.3
C210	1-164-847-11	s	CERAMIC 7PF 0.5PF 16V
C211	1-164-847-11	s	CERAMIC 7PF 0.5PF 16V
C212	1-164-943-11	s	CERAMIC 0.01uF 10% 16V
C213	1-107-813-11	s	TANTAL 10uF 20% 6.3
C214	1-135-328-11	s	TANTAL 4.7uF 20% 16V
C215	1-135-328-11	s	TANTAL 4.7uF 20% 16V
C216	1-135-193-11	s	TANTAL 0.1uF 20% 35V
C217	1-164-943-11	s	CERAMIC 0.01uF 10% 16V
C218	1-135-193-11	s	TANTAL 0.1uF 20% 35V
C219	1-164-943-11	s	CERAMIC 0.01uF 10% 16V
C220	1-107-813-11	s	TANTAL 10uF 20% 6.3
C221	1-109-888-11	s	TANTAL 3.3uF 20% 6.3
C222	1-135-194-21	s	TANTAL 0.22uF 10% 35V
C223	1-164-858-11	s	CERAMIC 22PF 5% 16V
C225	1-135-334-11	s	TANTAL 100uF 20% 6.3
C226	1-107-813-11	s	TANTAL 10uF 20% 6.3
C227	1-107-813-11	s	TANTAL 10uF 20% 6.3
CN201	1-691-476-21	s	CONNECTOR, BOARD TO BOARD 20P
CN202	1-691-476-21	s	CONNECTOR, BOARD TO BOARD 20P
IC201	8-752-379-24	s	IC CXD1261AR-T6
IC202	8-752-051-25	s	IC CXA1310AQ
IC203	8-759-524-32	s	IC TC74VHC367FT(EL)
L201	1-412-030-11	s	INDUCTOR CHIP 22uH
L202	1-412-030-11	s	INDUCTOR CHIP 22uH
L203	1-412-030-11	s	INDUCTOR CHIP 22uH
L204	1-410-201-51	s	INDUCTOR CHIP 5.6UH
L205	1-412-030-11	s	INDUCTOR CHIP 22uH
R202	1-218-965-11	s	METAL 10K 5% 1/16W (for CCB-ME37CE)
R206	1-218-957-11	s	METAL 2.2K 5% 1/16W
R209	1-218-957-11	s	METAL 2.2K 5% 1/16W
R210	1-218-957-11	s	METAL 2.2K 5% 1/16W
R212	1-218-957-11	s	METAL 2.2K 5% 1/16W
R213	1-218-957-11	s	METAL 2.2K 5% 1/16W
R214	1-218-961-11	s	METAL 4.7K 5% 1/16W
R215	1-218-961-11	s	METAL 4.7K 5% 1/16W
R216	1-218-961-11	s	METAL 4.7K 5% 1/16W
R217	1-218-953-11	s	METAL 1K 5% 1/16W
R218	1-218-957-11	s	METAL 2.2K 5% 1/16W
R219	1-218-961-11	s	METAL 4.7K 5% 1/16W
R220	1-218-941-11	s	METAL 100 5% 1/16W
R221	1-218-941-11	s	METAL 100 5% 1/16W
R222	1-218-957-11	s	METAL 2.2K 5% 1/16W
R223	1-218-970-11	s	METAL 27K 5% 1/16W
R224	1-218-966-11	s	METAL 12K 5% 1/16W
R225	1-218-965-11	s	METAL 10K 5% 1/16W
R226	1-218-950-11	s	METAL 560 5% 1/16W

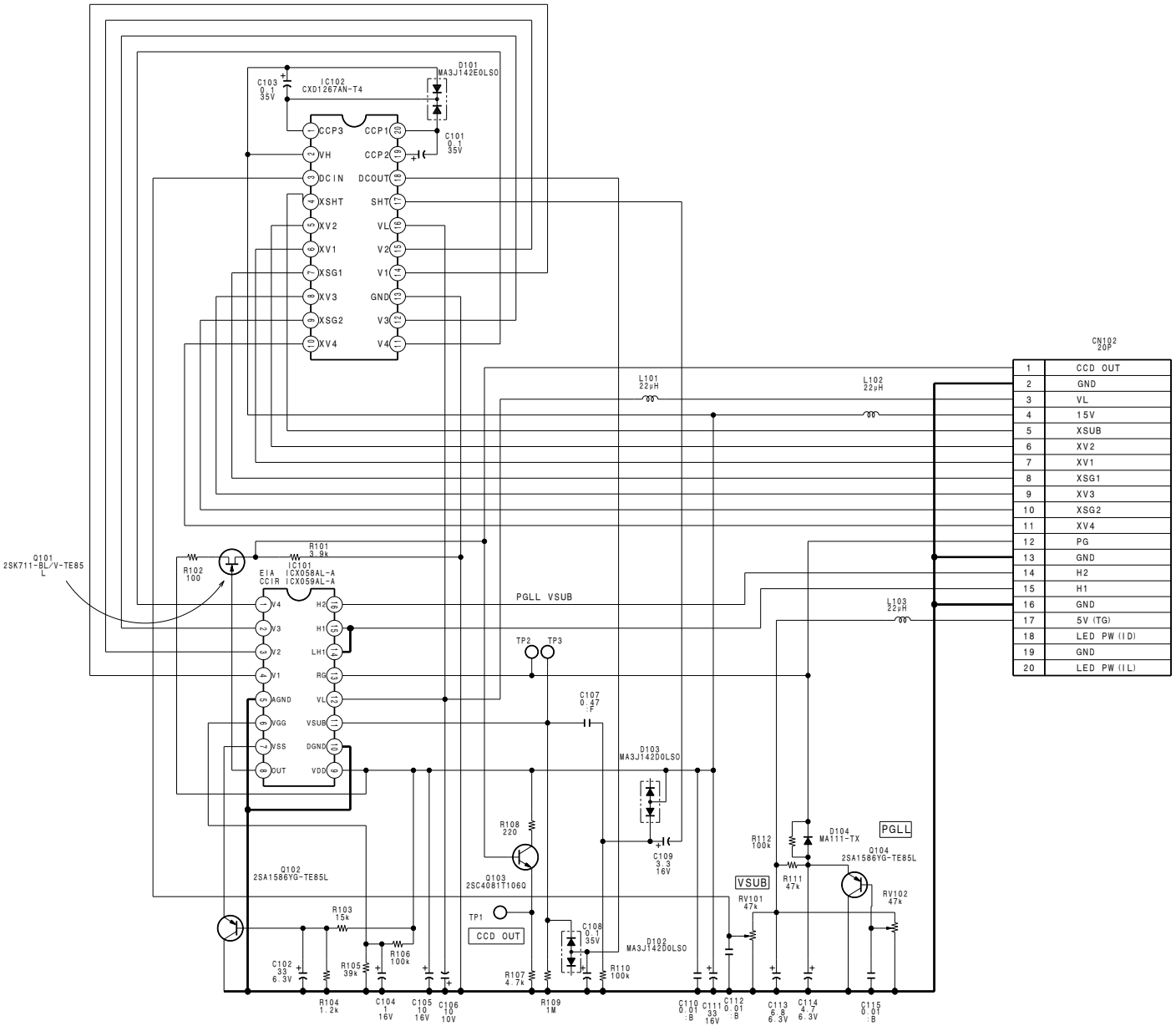
(VP-53 BOARD(CCB-ME37/ME37CE))

Ref. No. or Q'ty	Part No.	SP	Description
R229	1-218-990-11	s	METAL GLAZE 0 5% 1/16W
R231	1-220-169-11	s	RES, CHIP 75 5% 1/16W

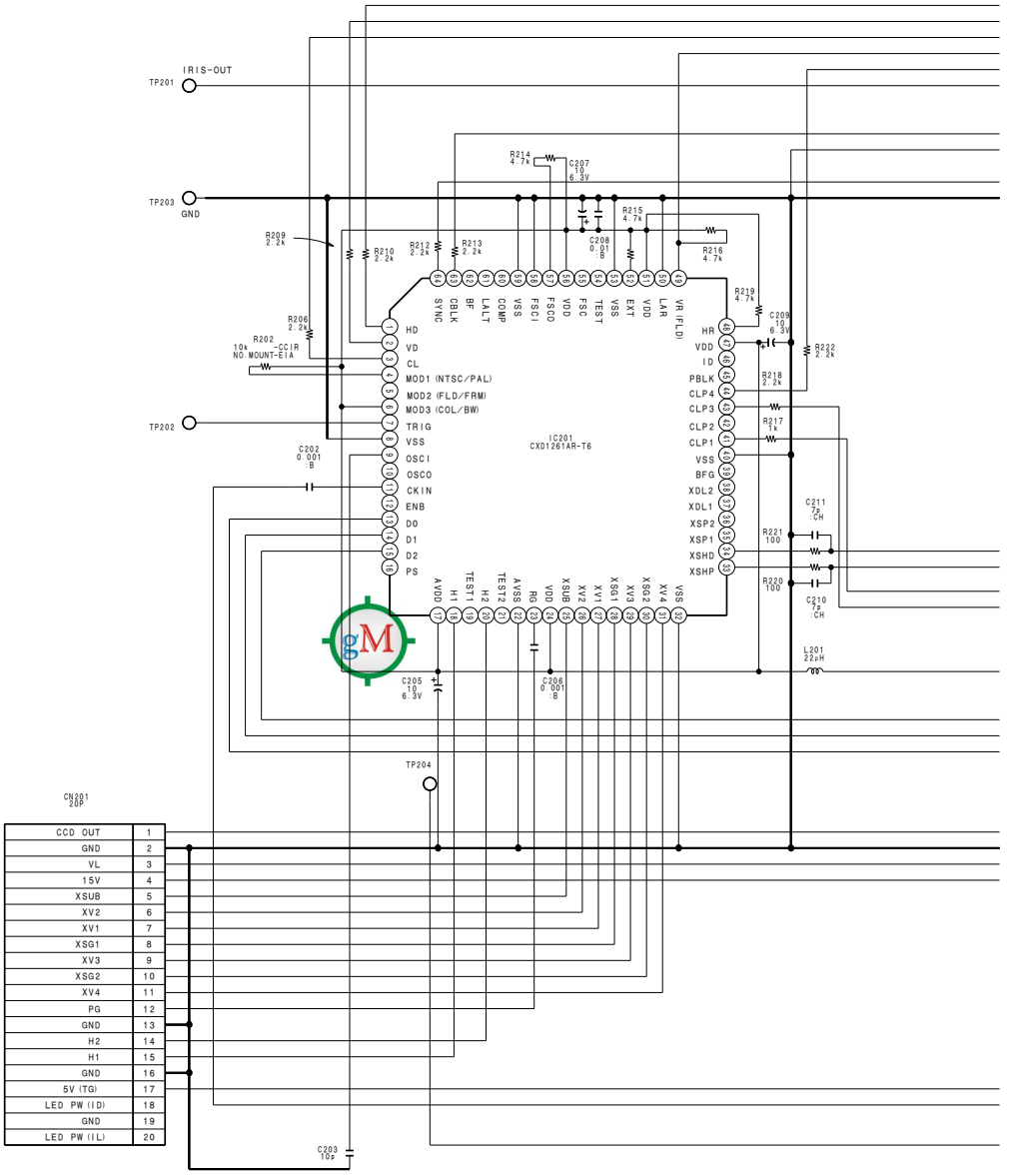
PACKING MATERIALS & SUPPLIED ACCESSORIES

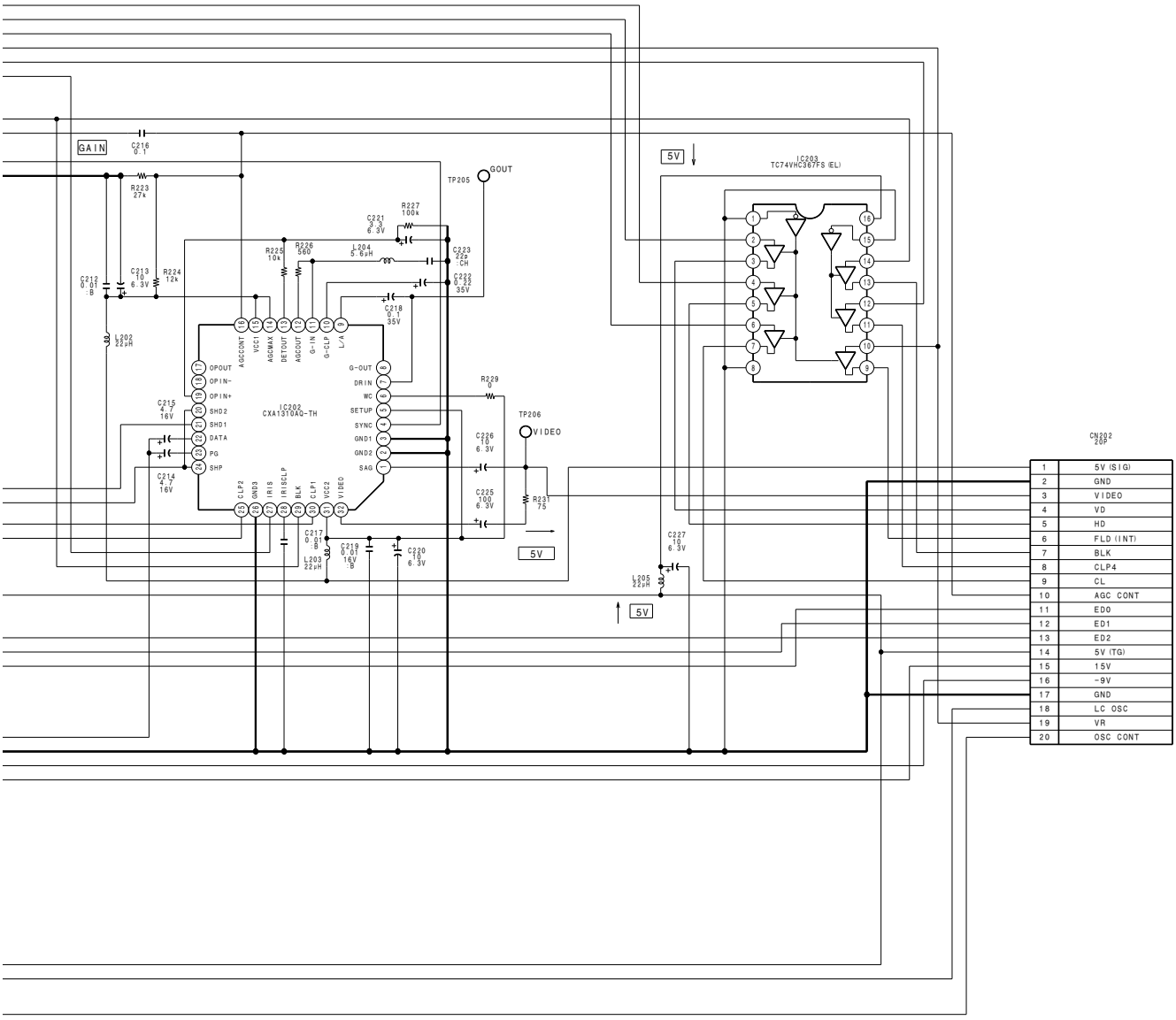
Ref. No. or Q'ty	Part No.	SP	Description
1pc	1-750-343-11	o	CONNECTOR, FFC/EPC (ZIF) 22P
1pc	1-777-992-11	o	CABLE, FLEXIBLE FLAT (22CORE)

SECTION 4
SCHEMATIC DIAGRAM

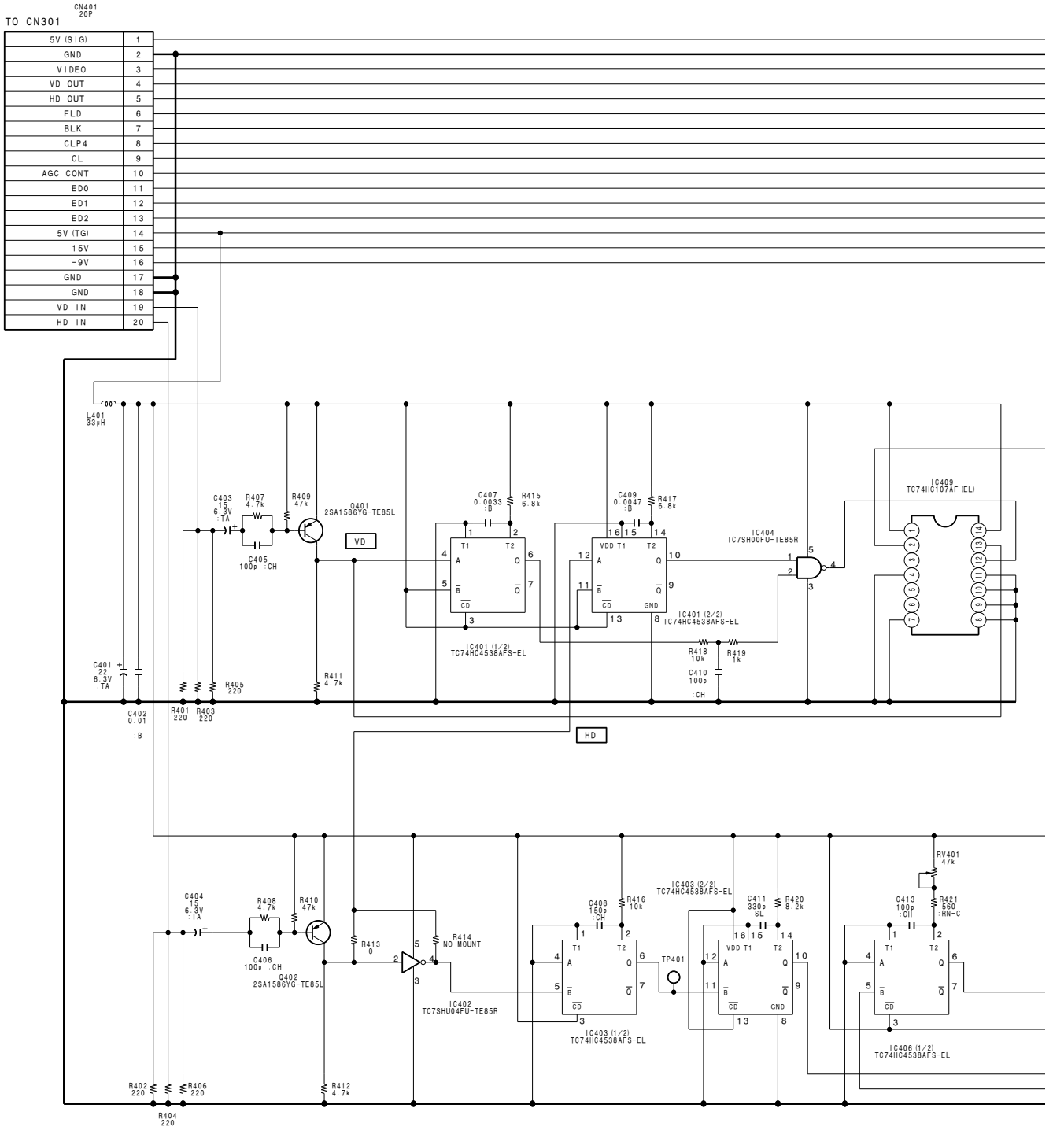


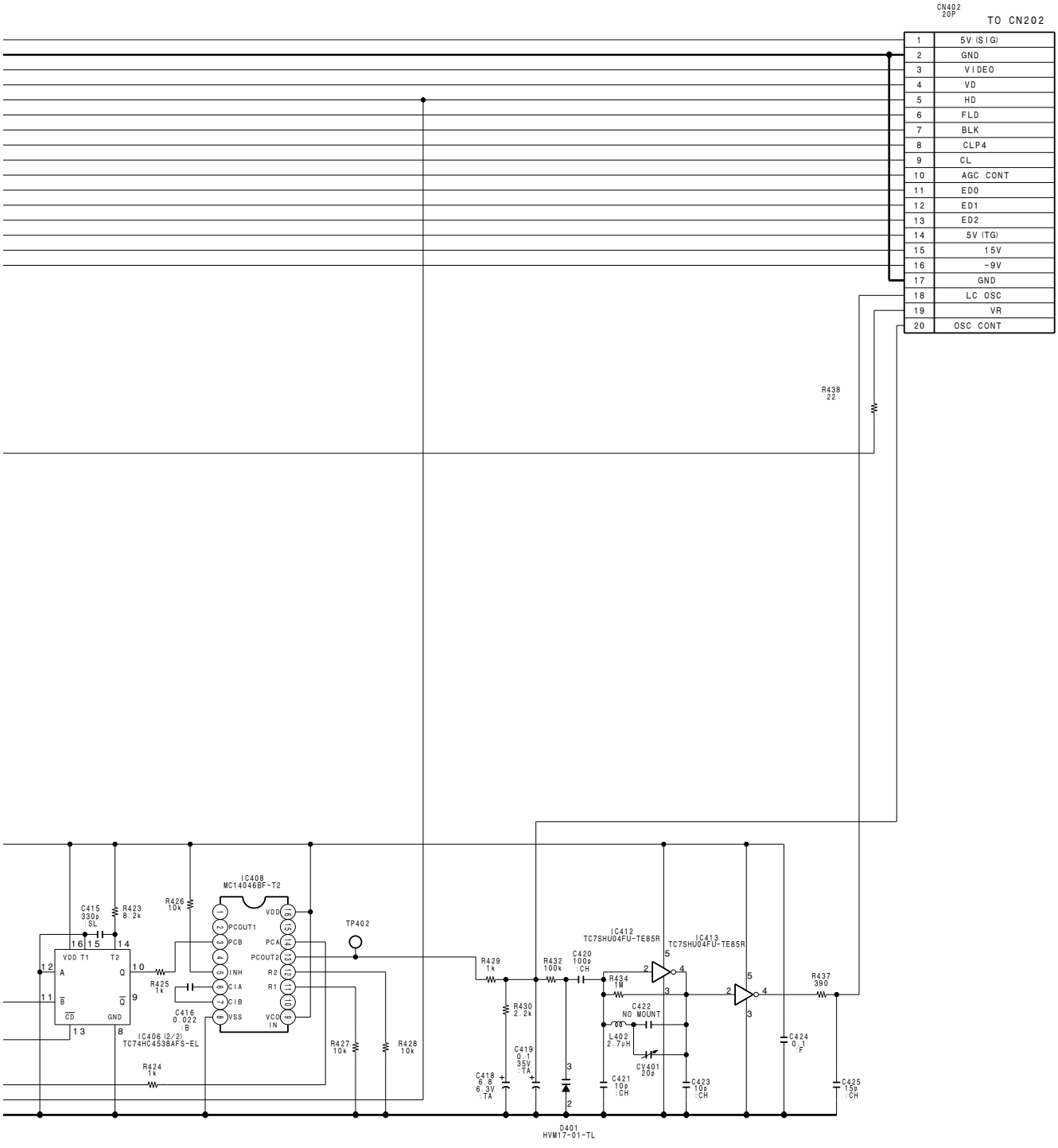
BI-127
1-667-419-11


IRIS-OUT
TP201
TP203
GND
TP202
TP204
IC201
CXD1261AR-T6
HD
VD
CL
MOD1 (NTSC/PAL)
MOD2 (FLD/FRM)
MOD3 (COL/BW)
TRIG
VSS
OSCI
OSCO
CKIN
ENB
D0
D1
D2
PS
HR
VDD
ID
PBLK
CLP4
CLP3
CLP2
CLP1
VSS
BFG
XDL2
XDL1
XSP2
XSP1
XSHD
XSHP
SYNC
CBLK
BF
LALT
COMP
VSS
FSCI
FSCO
VDD
FSC
TEST
VSS
EXT
VDD
LAR
VR(FLD)
AVDD
H1
TEST1
H2
TEST2
AVSS
RG
VDD
XSUB
XV2
XV1
XSG1
XV3
XSG2
XV4
VSS
R214 4.7k
C207 10 6.3V
R215 4.7k
C208 0.01 :B
R216 4.7k
R209 2.2k
R210 2.2k
R212 2.2k
R213 2.2k
R219 4.7k
C209 10 6.3V
R222 2.2k
R206 2.2k
R202 10k NO.MOUNT-EIA -CCIR
R218 2.2k
R217 1k
C202 0.001 :B
C211 75 :CH
R221 100
R220 100
C210 75 :CH
L201 22uH
C205 10 6.3V
C206 0.001 :B
C203 10p
CN201 20P
CCD OUT 1
GND 2
VL 3
15V 4
XSUB 5
XV2 6
XV1 7
XSG1 8
XV3 9
XSG2 10
XV4 11
PG 12
GND 13
H2 14
H1 15
GND 16
5V (TG) 17
LED PW (ID) 18
GND 19
LED PW (IL) 20

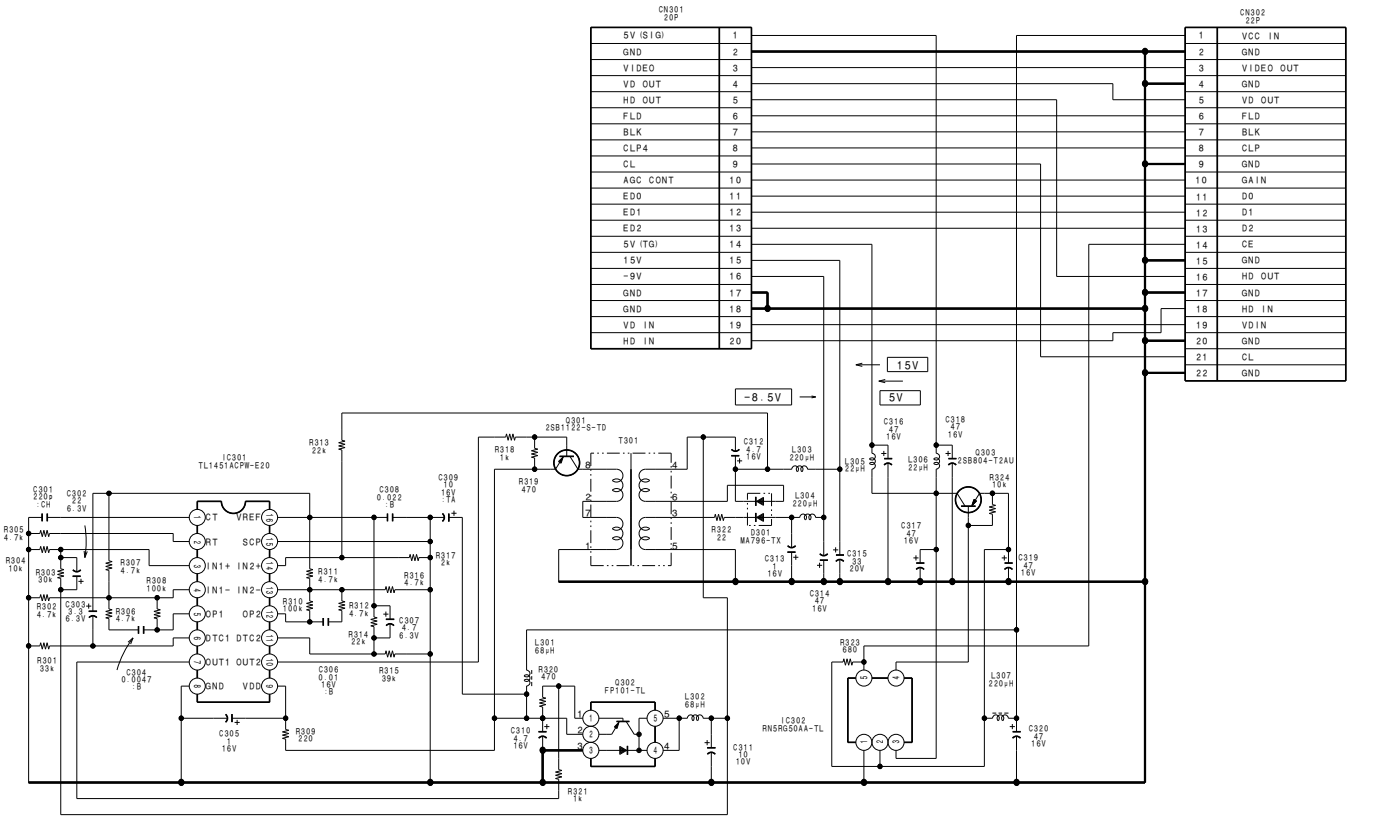


VP-53
1-667-420-11


CN401
20P
TO CN301
5V (SIG) 1
GND 2
VIDEO 3
VD OUT 4
HD OUT 5
FLD 6
BLK 7
CLP4 8
CL 9
AGC CONT 10
ED0 11
ED1 12
ED2 13
5V (TG) 14
15V 15
-9V 16
GND 17
GND 18
VD IN 19
HD IN 20
L401 33µH
C401 22 6.3V :TA
C402 0.01 :B
C403 15 6.3V :TA
C404 15 6.3V :TA
C405 100p :CH
C406 100p :CH
C407 0.0033 :B
C408 150p :CH
C409 0.0047 :B
C410 100p :CH
C411 330p :SL
C413 100p :CH
R401 220
R402 220
R403 220
R404 220
R405 220
R406 220
R407 4.7k
R408 4.7k
R409 47k
R410 47k
R411 4.7k
R412 4.7k
R413 0
R414 NO MOUNT
R415 6.8k
R416 10k
R417 6.8k
R418 10k
R419 1k
R420 8.2k
R421 560 :RN-C
RV401 47k
Q401 2SA1586YG-TE85L
Q402 2SA1586YG-TE85L
VD
HD
IC401 (1/2) TC74HC4538AFS-EL
IC401 (2/2) TC74HC4538AFS-EL
IC402 TC7SHU04FU-TE85R
IC403 (1/2) TC74HC4538AFS-EL
IC403 (2/2) TC74HC4538AFS-EL
IC404 TC7SH00FU-TE85R
IC406 (1/2) TC74HC4538AFS-EL
IC409 TC74HC107AF (EL)
TP401



ED-54
1-667-956-11



PS-505

1-667-957-11